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09/465481

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APPLICATION NO. 09/465481	FILING DATE 10/09/99	FIRST NAMED INVENTOR HSH	ATTORNEY DOCKET NO. A 20864.00700
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WM02/1010

EXAMINER ZAMANI, A

ART UNIT 2674	PAPER NUMBER 7
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DATE MAILED: 10/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

T.R

Office Action Summary

Application No.
09/415,481

Applicant(s)
Hsu et al.

Examiner
Ali Zamani

Art Unit
2674



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 34-63 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 34-37, 40-55, 57-59, and 62 is/are rejected.

7) ☒ Claim(s) 38, 39, 56, 60, 61, and 63 is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6

20) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 34-37, 40-55, 57-59, 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie et al. (US Pat. No. 5,880,411) in view of Clancy et al. (US Pat. No. 5,952, 998).
3. In regard to claims 34-37, 40-55, 57-59 and 62, Gillespie et al. disclose a transparent capacitive touch sensing system (6) comprised of: a substantially transparent sensor which can capacitively sense a user's finger or conductive stylus when either are touching or in very close proximity to sensor (see the abstract) and a sensing device for detecting capacitance changes on substantially transparent sensor (col. 11, lines 7-33), X input processing circuitry (12), Y input processing circuitry (14) an arithmetic unit (16), which uses the digital information, a gesture unit (20) which a signal to motion unit (18) and the sensor material can be conductive elastomer materials (Fig. 1, col. 9, lines 3-28). Gillespie et al. teach the sensor material can be anything that allows creation of a conductive X/Y matrix of pads and can be confined to any three dimensional surface, the sensor can also be used in an indirect manner, i.e it can have an

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insulating foam material covered by a conductive layer over the touch sensing surface and be used to detect any object (not just conductive) that passes against its surface see (Figs 2a-2d).

Gillespie et al. also teach that there are two different capacitive effects taking place when a finger approaches the touch sensor array (22), the first capacitive effect is trans-capacitance, or coupling between sense pads (34), and second capacitive effect is self capacitance, or coupling to virtual ground (col. 11, lines 7-19). Gillespie et al. further teach that the sensor technology can best detect any conducting material pressing against it by adding a compressible insulating layer covered by a layer of conductive material on top of the sensor and the sensor may also indirectly detect pressure from any object being handled, regardless of its electrical conductivity (col. 52, lines 18-29). Gillespie et al. substantially teach the above claimed limitations except for teaching “sensor is electrically shielded a substantially transparent ground plane”. However, Clancy et al. teach a transparent touchpad with flat panel display includes a substantially transparent substrate, an array of conductive traces are formed on the upper and lower surfaces of the substrate and a flat panel display is situated beneath the substrate so as to project images upwardly through the substrate to enable the computer user’s to visualize the images (Fig. 7, col. 4, lines 61-67). Clancy et al. also teach a technique for forming the transparent touchscreen (22) which may be formed from a membrane (70) which is preferably substantially transparent to light (Figs. 4 and 5) and the membrane (70) may be formed of a variety of materials like transparent plastic film). Thus, it would have been obvious to one of ordinary skill in the art to combine the

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panel display of Gillespie and display of Clancy to provide a transparent touchpad with flat display panel with low-cost, highly integrated, low power, capacitive transparent sensor.

4. Claims 38, 39, 56, 60-61 and 63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Donohue et al. and Greanias et al. are made of record to show a various types of touch sensing system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Zamani whose telephone number is (703) 308-6414. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerepe, can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

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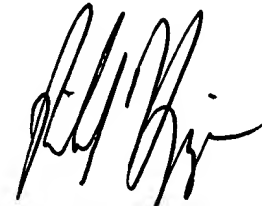
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.

Ali Zamani

October 5, 2001



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**